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| APPLICATION NO.         | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 10/635,118              | 08/06/2003  | Galen M. Martin      | 18082               | 2072             |
| 7590                    | 05/25/2004  |                      |                     |                  |
|                         |             |                      | EXAMINER            |                  |
|                         |             |                      | TA, THO DAC         |                  |
|                         |             |                      | ART UNIT            | PAPER NUMBER     |
|                         |             |                      | 2833                |                  |
| DATE MAILED: 05/25/2004 |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                               |
|------------------------------|------------------------|-------------------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b>           |
|                              | 10/635,118             | MARTIN, GALEN M.<br><i>pw</i> |
|                              | <b>Examiner</b>        | <b>Art Unit</b>               |
|                              | Tho D. Ta              | 2833                          |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 06 August 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "socket terminals" must be shown or the feature(s) canceled from the claim(s) (claims 7-20). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 7-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims present limitations not illustrated or disclosed in the specification such that the claims may be considered indefinite. It is unclear how the structure of the alignment plate can accommodate the socket terminals. For purpose of examination, Examiner assumes that the terminals are blade terminals.

Claim 15 recites the limitation "said socket housing" in line 2. There is insufficient antecedent basis for this limitation in the claim. For purpose of examination, Examiner assumes that claim 15 is depend from claim 12.

Claim 16 recites the limitation "said plug housing" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10, 15, 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoelscher et al. (6,409,525).

In regard to claim 1, Hoelscher et al. discloses an electrical connector comprising an insulative housing 134, 34 and a plurality of terminals 112, 12, the housing 134, 34 providing a protective shroud 160, 60 around the terminals 112, 12, and an alignment plate member 142, 42, the alignment plate member 142, 42 being movable along the terminals 112, 12 in a mating direction of the terminals 112, 12 when mated with a complementary electrical connector 114, 14, the terminals 112, 12 being mounted in an array on a printed circuit board 108, 8, with the housing 134, 34 being attached to the printed circuit board 108, 8, the alignment plate member 142, 42 being movable from a first position (figures 16, 3) adjacent to free ends of the terminals 112, 12, to a second position (figures 17, 4) adjacent the printed circuit board 108, 8.

In regard to claim 2, Hoelscher et al. discloses locating elements 150, 152, 180, 50, 52, 80 on the alignment plate member 142, 42 and on the protective shroud to position the alignment plate member 142, 42 relative to the terminals 112, 12.

In regard to claim 3, Hoelscher et al. discloses that the locating elements 150, 152, 50, 52 on the alignment plate 142, 42 provide a stand-off feature which contacts the printed circuit board 108, 8 (column 4, lines 59-66).

In regard to claim 4, Hoelscher et al. discloses that the locating elements 150, 152, 50, 52 comprise locating lugs on the alignment plate member 142, 42, and channels 82 (see column 8, lines 16-20) surrounding a perimeter of the protective shroud 160, 60 profiled to receive the lugs 150, 152, 50, 52, the lugs having a laterally extending portion and a stand-off foot portion (see fig. 13).

In regard to claim 5, Hoelscher et al. discloses a latching element 154, 54 to latch the alignment plate in the first position (column 5, lines 6-8 and column 7, lines 60-64).

In regard to claim 6, Hoelscher et al. discloses posts 170, 68 extending upwardly from the alignment plate 142, 42 for alignment with a complementary connector 114, 14 when mated to prevent misalignment (see figures 3 and 16).

In regard to claim 7, as best understood, Hoelscher et al. discloses an electrical connector assembly, comprising: a socket connector comprising: a plurality of blade terminals 112, 12 being mounted in an array on a printed circuit board 108, 8; an insulative socket housing 134, 34 providing a protective shroud 160, 60 around the terminals 112, 12; and an alignment plate 142, 42 being movable along the terminals 112, 12 in a mating direction of the terminals 112, 12, the alignment plate 142, 42 being movable from a first position adjacent to free ends of the terminals 112, 12, to a second position adjacent the printed circuit board 108, 8; and a plug connector comprising: a plug housing 114, 14 profiled for mating reception in the protective shroud 160, 60; and a plurality of socket terminals 116, 16 electrically connectable with the terminals 112, 12.

In regard to claim 8, as best understood, Hoelscher et al. discloses that the terminals 112, 12 are profiled as a plurality of posts upstanding from the printed circuit board 108, 8.

In regard to claim 9, as best understood, Hoelscher et al. discloses that the plug housing 114, 14 has a front mating face with apertures complementarily located to receive the posts 112, 12.

In regard to claim 10, as best understood, Hoelscher et al. discloses the alignment plate 142, 42 further comprises insulative aligning posts 152, 52 upstanding

therefrom and extending outwardly; and the plug housing front mating face including alignment openings to receive the aligning posts (column 4, lines 66, 67 and column 5, lines 1-5 and column 8, lines 16-20).

In regard to claim 15, Hoelscher et al. discloses a latching assembly 154, 54 cooperatively provided by the housing 134, 34 and the alignment plate 142, 42 to latch the alignment plate 142, 42 in the first position (column 5, lines 6-8 and column 7, lines 60-64).

In regard to claim 17, as best understood, Hoelscher et al. discloses an electrical connector, comprising: a plurality of terminals 112, 12 being mounted in an array on a printed circuit board 108, 8; an insulative shroud 160, 60 around the terminals 112, 12, and an alignment plate 142, 42 being movable along the terminals 112, 12 in a mating direction of the terminals 112, 12, the alignment plate 142, 42 being movable from a first position adjacent to free ends of the terminals 112, 12, to a second position against the printed circuit board 108, 8.

In regard to claim 18, as best understood, Hoelscher et al. discloses locating elements 150, 152, 180, 50, 52, 58, 80 on the alignment plate 142, 42 and on the protective shroud 160, 60 to position the alignment plate 142, 42 relative to the terminals 112, 12.

In regard to claim 19, as best understood, Hoelscher et al. discloses a latching element 154, 54 to latch the alignment plate 142, 42 in the first position (column 5, lines 6-8 and column 7, lines 60-64).

In regard to claim 20, as best understood, Hoelscher et al. discloses posts 152, 52 extending upwardly from the alignment plate 142, 42 for alignment with a complementary connector 114, 14 when mated to prevent misalignment (column 4, lines 66, 67, column 5, lines 1-5 and column 8, lines 16-20).

6. Claims 7-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakuraoka et al. (5,437,558).

In regard to claim 7, as best understood, Sakuraoka et al. discloses an electrical connector assembly, comprising: a socket connector comprising: a plurality of blade terminals 12 being mounted in an array on a printed circuit board 20 (column 3, lines 65-67); an insulative socket housing 14 providing a protective shroud 22 around the terminals 12; and an alignment plate 32 being movable along the terminals 12 in a mating direction of the terminals 12, the alignment plate 32 being movable from a first position adjacent to free ends of the terminals 12, to a second position adjacent the printed circuit board 20; and a plug connector 10 comprising: a plug housing profiled for mating reception in the protective shroud 22; and a plurality of socket terminals 16 electrically connectable with the terminals 12.

In regard to claim 8, as best understood, Sakuraoka et al. discloses that the terminals 12 are profiled as a plurality of posts upstanding from the printed circuit board 20.

In regard to claim 9, as best understood, Sakuraoka et al. discloses that the plug housing 10 has a front mating face with apertures complementarily located to receive the posts 12.

In regard to claim 10, as best understood, Sakuraoka et al. discloses the alignment plate 32 further comprises insulative aligning posts 42 upstanding therefrom and extending outwardly, and the plug housing 10 front mating face including alignment openings 28 to receive the aligning posts 42.

In regard to claim 11, as best understood, Sakuraoka et al. discloses that the aligning posts 42 extend out a distance greater than the terminal posts 12.

In regard to claim 12, as best understood, Sakuraoka et al. discloses that the plug and socket connectors having latching detents 30, 30a, 44 cooperatively provided on the socket and plug housings to temporarily hold the housings together in an unmated condition see fig. 2 (column 5, lines 10-36).

In regard to claim 13, as best understood, Sakuraoka et al. discloses that the detents are provided on exterior endwalls of the plug housing 10, and on interior endwalls of the housing 14.

In regard to claim 14, as best understood, Sakuraoka et al. discloses that the detents are so positioned on the socket and plug housings such that when the housings are held by the detents, the aligning posts 42 are partially inserted in respective alignment openings 28, but the socket and plug terminals 12, 16 are disengaged (see fig. 2).

In regard to claim 15, Sakuraoka et al. discloses a latching assembly cooperatively provided by the housing 14 and the alignment plate 32 to latch the alignment plate 32 in the first position (see fig. 2)

In regard to claim 16, as best understood, Sakuraoka et al. discloses that the plug housing 10 includes a disengagement element 30, 30a to disengage the latching assembly, to allow the alignment plate 32 to be moved to the second position by the movement of the plug housing 10 (column 5, lines 10-36).

In regard to claim 17, as best understood, Sakuraoka et al. discloses an electrical connector, comprising: a plurality of terminals 12 being mounted in an array on a printed circuit board 20 (column 3, lines 65-67); an insulative shroud 22 around the terminals

12, and an alignment plate 32 being movable along the terminals 12 in a mating direction of the terminals 12, the alignment plate 32 being movable from a first position adjacent to free ends of the terminals 12, to a second position against the printed circuit board 20.

In regard to claim 18, as best understood, Sakuraoka et al. discloses locating elements 40, 24 on the alignment plate 32 and on the protective shroud 22 to position the alignment plate 32 relative to the terminals 12.

In regard to claim 19, as best understood, Sakuraoka et al. discloses a latching element 40, 24 to latch the alignment plate 32 in the first position (see fig. 2).

In regard to claim 20, as best understood, Sakuraoka et al. discloses posts 36, 42 extending upwardly from the alignment plate 32 for alignment with a complementary connector 10 when mated to prevent misalignment.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho D. Ta whose telephone number is (571) 272-2014. The examiner can normally be reached on M-F (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 ext 33. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*modata*  
**THO.D.TA**  
**PRIMARY EXAMINER**